

Title (en)  
METHOD FOR MAKING AN ABSORBER COATING FOR SOLAR HEATING, THE COATING AS SUCH AND ITS APPLICATION

Title (de)  
VERFAHREN ZUR HERSTELLUNG EINER ABSORPTIONSBESCHICHTUNG FÜR SONNENWÄRME, BESAGTE BESCHICHTUNG UND IHRE ANWENDUNG

Title (fr)  
PROCÉDÉ DE FABRICATION D'UN REVÊTEMENT D'ABSORBEUR POUR CHAUFFAGE SOLAIRE, REVÊTEMENT EN TANT QUE TEL ET SON APPLICATION

Publication  
**EP 2545328 A4 20150805 (EN)**

Application  
**EP 11733136 A 20110112**

Priority

- NO 20100057 A 20100113
- NO 2011000014 W 20110112

Abstract (en)  
[origin: WO2011087374A1] Method for making an absorber coating for solar heating and a coating as such to be applied on a metal substrate, in particular a coating to be applied on a thin aluminium metal sheet. The coating is of the sol-gel type based on a metal oxide precursor where pigment particles are intimately mixed into the precursor followed by application of the mixed sol lacquer on the substrate and thereafter reaction in humid air at a required temperature to obtain the sol-gel coating. The precursor may preferably be a CeO<sub>2</sub> (NO<sub>3</sub>) based sol with preferably 20 % CeO<sub>2</sub> having a particle size of 10- 20 nm and a pH of 1,5. Further the pigment may be a manganese ferrite black spinel, Mn<sub>3</sub>Cu<sub>2</sub>FeO<sub>8</sub>.

IPC 8 full level  
**F24J 2/48** (2006.01); **C23C 18/12** (2006.01)

CPC (source: EP KR US)  
**C09D 1/00** (2013.01 - US); **C23C 18/12** (2013.01 - KR); **C23C 18/1216** (2013.01 - EP US); **C23C 18/1241** (2013.01 - EP US); **C23C 18/1254** (2013.01 - EP US); **C23C 18/1283** (2013.01 - EP US); **F24S 70/10** (2018.04 - KR); **F24S 70/20** (2018.04 - EP US); **F24S 70/225** (2018.04 - EP US); **F24S 70/25** (2018.04 - KR); **Y02B 10/20** (2013.01 - EP US); **Y02E 10/40** (2013.01 - EP US)

Citation (search report)

- [X] US 6605365 B1 20030812 - KRIENKE KENNETH A [US], et al
- [XY] LEON KALUZA ET AL, JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY, vol. 20, no. 1, 1 January 2001 (2001-01-01), pages 61 - 83, XP055019926, ISSN: 0928-0707, DOI: 10.1023/A:1008728717617
- [X] JAPELJ B ET AL: "Preparation of a TiMEMO nanocomposite by the sol-gel method and its application in coloured thickness insensitive spectrally selective (TISS) coatings", SOLAR ENERGY MATERIALS AND SOLAR CELLS, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 92, no. 9, 1 September 2008 (2008-09-01), pages 1149 - 1161, XP022735464, ISSN: 0927-0248, [retrieved on 20080527], DOI: 10.1016/J.SOLMAT.2008.04.003
- [Y] RINCON ET AL: "Optical characterization of tandem absorber/reflector systems based on titanium oxide-carbon coatings", SOLAR ENERGY MATERIALS AND SOLAR CELLS, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 91, no. 15-16, 19 July 2007 (2007-07-19), pages 1421 - 1425, XP022152488, ISSN: 0927-0248, DOI: 10.1016/J.SOLMAT.2007.04.005
- [A] CRNJAK OREL Z C ET AL: "Spectrally selective paint coatings: Preparation and characterization", SOLAR ENERGY MATERIALS AND SOLAR CELLS, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 68, no. 3-4, 1 June 2001 (2001-06-01), pages 337 - 353, XP004230574, ISSN: 0927-0248, DOI: 10.1016/S0927-0248(00)00367-6
- See references of WO 2011087374A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2011087374 A1 20110721**; AU 2011205868 A1 20120816; AU 2011205868 B2 20130905; CA 2786478 A1 20110721; CA 2786478 C 20150414; CN 102844629 A 20121226; CN 102844629 B 20171222; EP 2545328 A1 20130116; EP 2545328 A4 20150805; EP 2545328 B1 20190313; ES 2729751 T3 20191106; JP 2013517379 A 20130516; JP 6013916 B2 20161025; KR 20120126082 A 20121120; RU 2012134388 A 20140220; RU 2528486 C2 20140920; US 2013064981 A1 20130314; ZA 201205168 B 20130424

DOCDB simple family (application)  
**NO 2011000014 W 20110112**; AU 2011205868 A 20110112; CA 2786478 A 20110112; CN 201180006182 A 20110112; EP 11733136 A 20110112; ES 11733136 T 20110112; JP 2012548909 A 20110112; KR 20127021260 A 20110112; RU 2012134388 A 20110112; US 201213545409 A 20120710; ZA 201205168 A 20120711